

JIG DEVICE FOR PACKAGING AN IMAGE SENSOR

BACKGROUND OF THE INVENTION

Field of the invention

The invention relates to a carrier mechanism for an image sensor package,
5 and in particular to fix a transparent layer for an image sensor package, so may be
decrease the damage of the transparent layer, so as to increase the production
yield.

Description of the Related Art

Referring to FIG. 1, a conventional image sensor includes a substrate 10, a
10 frame layer 18, a photosensitive chip 26, a plurality of wires 28, and a transparent
layer 34. The substrate 10 has a first surface 12 on which a plurality of signal
input terminals 15 is formed, and a second surface 14 on which a plurality of
signal output terminals 16 is formed. The frame layer 18 has an upper surface 20
and a lower surface 22 adhered to the first surface 12 of the substrate 10 to form a
15 chamber 24 together with the substrate 10. The photosensitive chip 26 is arranged
within the chamber 24 and is mounted to the first surface 12 of the substrate 10.
Each wire 28 has a first terminal 30 and a second terminal 32. The first terminals
30 are electrically connected to the photosensitive chip 26, and the second
terminals 32 are electrically connected to the signal input terminals 15 of the
20 substrate 10. The transparent layer 34 is adhered to the upper surface 20 of the
frame layer 18.

In order to finish the above-mentioned package processes, the transparent layer 34 10 has to be efficiently cleaned, so as to decrease the particle, and positioned transparent layer 34 to a carrier for operator to take that.

Please refer to FIG. 2, is a traditional carrier mechanism for an image sensor
5 package includes a substrate 40, which is formed with plural penetrated slots 42, each which is formed with a frame 44. Please refer to FIG.3, is a cross-sectional showing a carrier for image sensor package, while the transparent layer 34 is cleaned after, is positioned to the penetrated slot 42, and located on the frame 44.

However, the conventional carrier mechanism for an image sensor package
10 has following drawbacks.

1. Since the surface of the transparent layer 34 is contacted the surface of the frame, so the surface of the transparent layer 34 is easily damage. Thus, the manufacturing yield is decrease.

SUMMARY OF THE INVENTION

15 An objective of the invention is to provide a carrier mechanism for an image sensor package, wherein the processes for packaging an image sensor may be efficiently cleaned, so as to increase the production yield.

To achieve the above-mentioned object, the invention includes a substrate and plural positioned post. The substrate is formed with an upper surface, a lower
20 surface, and plural penetrated slots through the upper surface to the lower surface of the substrate. At the periphery of the each penetrated slot of the substrate is

formed with plural fixing regions, then the transparent layer is not contact with the upper surface of the substrate. The positioned post is fixed at the fixing region of the substrate to fix the periphery of the transparent layer.

BRIEF DESCRIPTION OF THE DRAWINGS

5 FIG. 1 is a schematic illustration view showing a conventional image sensor package.

FIG. 2 is a cross-sectional view showing a conventional carrier mechanism for an image sensor package.

FIG. 3 is a schematic illustration showing a carrier mechanism for an
10 image sensor package of the present invention.

FIG. 4 is a top view showing a carrier mechanism for an image sensor package of the present invention.

FIG.5 is a schematic illustration showing a carrier mechanism for an image sensor package of the present invention.

DETAILED DESCRIPTION OF THE INVENTION

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Please refer to FIG.4 and FIG.5. A carrier mechanism for an image sensor of the present invention includes a substrate 50 and plural positioned posts 52.

The substrate 50 is formed with an upper surface 54, a lower surface 56, and plural penetrated slots 56 through the upper surface 54 to the lower surface 56 of
20 the substrate 50. In the embodiment, the penetrated slot 56 is a shaped of octagon,

at the periphery of the each penetrated slot 58 of the substrate 50 is formed with plural fixing regions 60, then the transparent layer 62 is not contact with the upper surface 54 of the substrate 52.

Plural positioned post 52, each which is fixed at the fixing region 60 of the substrate. In the embodiment, each fixing region 60 has two positioned posts 50 to
5 fix the periphery of the transparent layer 62. And the plural positioned posts 52 are integrated formed with the substrate 50

The transparent layer 62 is arranged at the top of the penetrated slot 58 of the substrate 50, so each angle of the transparent layer 62 is located between
10 positioned posts 52 located at the fixing region 60. Therefore the transparent layer 62 is fixed and the surface of the transparent layer 62 is not contact with the substrate 50, so that the surface of the transparent layer 62 can not damage to increase the production yield.

While the invention has been described by way of an example and in terms
15 of a preferred embodiment, it is to be understood that the invention is not limited to the disclosed embodiment. To the contrary, it is intended to cover various modifications. Therefore, the scope of the appended claims should be accorded the broadest interpretation so as to encompass all such modifications.